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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,785	10/10/2006	Rob Otte	GB 040087	4522
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EXAMINER				
DOBSON, DANIEL G				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,785

Applicant(s)

OTTE, ROB

Examiner

DANIEL G. DOBSON

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 10/09/2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "focusing element" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 9, 10, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,154,297 to Javitt et al.

As to **Claim 1**, *Javitt* discloses a receiver for optical communications including (Fig. 1, 10):

at least one primary optical detector (Fig. 1, 50) for receiving radiation from a radiation beam when the radiation beam is aligned with the primary optical detector (Col. 2, ll. 59-64), and

at least one auxiliary optical detector (Fig. 1, 80) arranged to receive radiation from the radiation beam when the radiation beam is not aligned with the primary optical detector (Col. 2, ll. 59-64, when the transceiver is miss-aligned, light still reaches the quad sensor to properly align transceiver),

characterized in that the receiver further includes a diffuser (Fig. 1, 30) for redirecting radiation towards the auxiliary detector (Col. 3, ll. 5-6, the splitter sends some of the light to the primary detector (50) and some of the light to the auxiliary detector (80) thereby diffusing the received light.)

As to **Claim 2**, *Javitt* discloses a focusing element (Fig. 1, 20) for focusing the incoming radiation beam onto the primary detector (Fig. 1, 50.)

As to **Claim 3**, *Javitt* discloses a receiver system for retrieving data from redirection radiation received at the auxiliary detector (Fig. 2, Col. 2, ll. 51-64; relative intensity received by the quad detector is analyzed to determine proper alignment for the transceiver.

As to **Claim 4**, *Javitt* discloses wherein the diffuser is a reflector (Fig. 1, 30) and is arranged to face substantially in the same direction as the primary detector (Fig. 1, the primary detector (50) faces the reflecting surface (20) and the reflecting surface of the diffuser (30) also substantially faces the reflecting surface (20)) to reflect the incoming radiation not aligned with the primary detector (Col. 2, ll. 59-64), and the auxiliary detector is arranged to substantially face the diffuser (Fig. 1, auxiliary detector (80) substantially faces the reflecting surface of the diffuser (30.))

As to **Claim 5**, *Javitt* discloses wherein the diffuser is arranged in substantially the same plane as the primary detector (Fig. 1, consider a plane perpendicular with the drawing and along the optical axis of the mirror (20), the diffuser (30) and the primary detector (50) are on this plane), and the diffuser and

primary detector are positioned in or in proximity to the focal plane of the focusing element (Fig. 1, the focal plane of the focusing element (20) coincides with the primary detector (this is necessary for optimal reception of the data) and the diffuser is close (in proximity) to the focal plane.)

As to **Claim 6**, *Javitt* discloses a control system connected to the auxiliary detector for aligning the primary detector with respect to the radiation beam in at least one direction based on the intensity of radiation received at the auxiliary detector (Col. 2, ll. 59-64.)

As to **Claim 7**, *Javitt* discloses wherein the control system aligns the primary detector with the radiation beam by moving the primary detector (Col. 2, ll. 51-64, the entire transceiver is moved and therefore the primary detector is moved to align with the received signal.)

As to **Claim 9**, *Javitt* discloses including at least one pair of auxiliary detectors (Fig. 2), each auxiliary detector being arranged to output current dependent on the intensity of received radiation, and the receiver includes means for calculating misalignment of the primary detector with respect to the radiation beam based on the output signals of each auxiliary detector (Col. 2, ll. 51-64.)

As to **Claim 10**, *Javitt* discloses two pairs of auxiliary detectors (Fig. 2, quad detector), wherein the calculating means is connected to both pairs of detectors for calculating misalignment of the primary detector with respect to the radiation beam in two substantially perpendicular directions (Col. 2, ll. 51-64.)

As to **Claim 15**, *Javitt* discloses a receiver for optical communications (Fig. 1) including:

- at least one primary optical detector for receiving an incoming radiation beam (Fig. 1, 50),
- a redirecting surface for redirecting and incoming radiation beam (Fig. 1, 30),
- at least one pair of auxiliary optical detectors arranged to receive redirected radiation from the surface (Fig. 1, 80, Fig. 2, two pairs), and
- a control system connected to the auxiliary detectors for aligning the primary detector and the incoming radiation beam in at least one direction (Col. 2, ll. 51-64.)

characterized in that the surface is a diffuser (the splitter sends some of the light to the primary detector (50) and some of the light to the auxiliary detector (80) thereby diffusing the received light) and the control system aligns the primary detector and radiation beam based non the intensity of redirected radiation received at the auxiliary detectors (Col. 2. ll. 51-64.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,154,297 to Javitt et al. and U.S. Patent Application Publication 2004/0208595 A1 to Mok et al.

As to **Claim 8**, *Mok* discloses a redirecting element arranged in the path of the incoming beam (Fig. 4, 60), wherein the control system aligns the primary detector with the radiation beam by moving the element (Fig. 4, tracking system (67) aligns the beam with the detector (76) by moving the element (60.))

Mok is from the same art with respect to optical communications, and is therefore analogous art.

At the time of the invention, it would have been obvious for a person of ordinary skill in the art to use a redirecting element to align the beam with the detector in the system disclosed by *Javitt*. The suggestion/motivation would have been to achieve alignment without moving the entire transceiver while minimizing the number of components (§ 10.)

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,154,297 to Javitt et al.

As to **Claim 11**, *Javitt* discloses a receiver according to claim 1 (see discussion above) and suggests a transmitter at another node for transmitting a radiation beam to be received by said receiver (Fig. 1, light must be transmitted from another node for reception at the instant node.)

At the time of the invention, it would have been obvious for a person of ordinary skill in the art to use a second node with a transmitter to transmit

information to the receiver disclosed by *Javitt*. The suggestion/motivation would have been to send information over distance while avoiding hard-wired solutions (Col. 1, ll. 7-40.)

8. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,154,297 to Javitt et al. and U.S. Patent Application Publication 2002/0131121 A1 to Jeganathan et al.

As to **Claim 12**, *Jeganathan* discloses first node including both a transmitter for transmitting a radiation beam and a receiver and said second node including a receiver, wherein the first node is arranged to align the radiation beam output from the transmitter on the first node with respect to the receiver on the second node, based on a signal output from the receiver in said first node (Fig. 1, two nodes with narrow transmission beams for communication, and wide beams for aligning to one another.)

Jeganathan is from the same art with respect to optical communications, and is therefor analogous art.

At the time of the invention, it would have been obvious for a person of ordinary skill in the art to use apply the transceiver disclosed by *Javitt* as two nodes with transmitters and receivers that align to one another. The suggestion/motivation would have been to provide a robust but inexpensive tracking system to maintain superior alignment between the transceivers (§ 4.)

As to **Claim 13**, *Jeganathan* discloses wherein the second node is arranged to transmit a relatively narrow divergence data beam and relatively

wide divergence auxiliary beam, and wherein the receiver in the first node is arranged to align the primary detector with respect to the auxiliary radiation beam (Fig. 1, narrow divergence beam for data and wide divergence beam for alignment.) The suggestion/motivation is the same as that used in the rejection for claim 12.

As to **Claim 14**, *Jeganathan* discloses wherein the network is arranged such that aligning the primary detector with respect to the auxiliary radiation beam also aligns the primary detector with the data beam from the second node (Fig. 1, narrow divergence beam for data and wide divergence beam for alignment.) The suggestion/motivation is the same as that used in the rejection for claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. DOBSON whose telephone number is (571)272-9781. The examiner can normally be reached on Mon. - Fri. 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel G. Dobson/
Examiner, Art Unit 2613
04/10/2009

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613